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CASES IN COUNTRY PRACTICE.

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No. VII.—ARTIFICIAL TEETH REMOVED FROM THE ŒSOPHAGUS.

IN the early part of the present summer (1862), I was called, in great haste, a short distance from town to see Mr. H——, a young man about 30 years of age, who (the messenger said) "was choking to death;" adding that he believed he had "*swallowed his teeth.*" Somewhat astonished at this, I took a few instruments with me, and was soon at the house. The young man was in a pitiable state, laboring for breath, his body bowed forward, his face livid, and once in a while clutching at his throat and mouth with his hands as if in extreme distress. It was now about 2, A.M., and it appeared that about an hour and a quarter before, whilst lying on his back, sound asleep, he had suddenly felt a suffocating sensation, and immediately after an involuntary effort at swallowing taking place, he found that his false teeth, of which he wore three ("front uppers") upon a plate, had gone down his throat; and, what was worse, a moment afterwards an injudicious attempt to pull them up brought on another spasmodic attempt to swallow, which carried them far out of reach, and into a position where their pressure on the trachea caused extreme dyspnœa.

I give here a wood cut of the plate of the teeth, by which some idea of the difficulties to which its peculiar shape gave rise may be obtained. It will be seen that this is a plate of three teeth, bent upon itself at each side, and each curved portion fashioned into double prongs, so as to clasp about the natural teeth, and hold the set firmly in its place. The plate was of silver, and the edges of all the prongs quite thin and dangerously sharp. The position of these prongs and edges is such, that in a flexible tube, like the œsophagus, an

attempt to move it in either direction would be liable to cause a point to penetrate the tissues, and hold everything fast.

I found, after several futile attempts to withdraw it (in which I got a good hold upon it with a pair of very long, slender, curved forceps), that it was firmly lodged in the œsophagus at a point between the top of the sternum and the thyroid cartilage. I presume it lay with its long axis (if I may so express it) across the tube, and so produced the greater dyspnœa. It evidently could only be removed by the use of considerable force; and putting aside the operation of removing it by incision from without as inadmissible, I proposed to try to get it *up* rather than to force it *down*, which, although it could be more easily done, would not be wholly free from danger, and promised by no means so satisfactory a result.

Keeping the blades of the long curved forceps before-mentioned firmly closed, they were passed down by the side and below the plate until I could use them as a lever, then by a sort of prying and lifting process, turning the forceps strongly with the right hand, assisted by the pressure of the left hand on the neck, I forced the teeth up quite a distance. Although this was done as gently as was consistent with the force required, it was a cruel trial for the half suffocated patient. The tissues it seemed could almost be *heard* to tear, and I have no doubt, from the sensation conveyed through the instrument to my hand, and from the symptoms of the patient after the operation, that the œsophagus was somewhat lacerated. As no delay could be allowed in the passage of the teeth over the chink of the glottis, the forceps were laid aside, and as soon as the patient took breath, having a small hand, I was enabled to force the left one far enough into the fauces to engage the tip of the middle finger under the plate, and then by a quick pull to bring it out; to my own satisfaction, and I hardly need add to the great joy of the patient. Some small vessels, large enough to bleed smartly for a few moments, were opened; but the whole amount of hæmorrhage was trivial.

The operation, of which I have spoken so much at length, was accomplished in a few moments after I reached the house; but I think the case worthy of relation (although I do not know it to be an *isolated* one), as a warning to those who, having false teeth, are so careless as to go to sleep without removing them from the mouth, or in some way making it certain to have them secure. A case, I remember, occurred in the practice of my preceptor and friend, Dr J. Mason Warren, of Boston, in which, during etherization, a set of teeth fell back into the fauces, for a time threatening to suffocate the patient, and from which dangerous condition she was only rescued by extreme promptitude of action on the part of that surgeon.

I would remark here, that the natural, involuntary action of the œsophagus, by which the food, after passing a certain point, is carried on towards the stomach, is a great source of embarrassment in cases like the one I have related; for the irritation created by the

foreign body causes not only a constant spasmodic effort on the part of the patient to swallow, but puts the involuntary action in play, which is directly antagonistic to the efforts of the surgeon.

My patient suffered for some days from swelling and inflammation of the throat, and had great pain in swallowing, but was not long ill, and is now entirely well.

ON CATARACT.

By Dr. Max Tetzer, with Additions by Prof. Arlt.

[From the Allgemeine Wiener Medizinische Zeitung, Nos. 1, 2, 3, 4, of the year 1862. Translated for the Boston Medical and Surgical Journal.]

In extracting, we have to remove from the eye the whole of the contents of the capsule by a clean-cut incision of the cornea, without wounding, especially without bruising, the iris, and without penetrating the vitreous humor. The opening made in the anterior capsule must be such that, after the lens has passed out, it may retract from the range of the pupil towards the zonula Zinnii.

The first requisite for the removal of the whole of the lens is the thorough ripeness of the cataract; it is ripe when the lens is opaque throughout up to the capsule, when no part of the peripheral layers remains transparent, and the period of swelling has passed. When the opacity reaches the cortical layer on the anterior surface and becomes general, the fibres of the lens swell up and press the anterior capsule forwards, so that the lens becomes thicker from before backwards. At this time we can generally recognize the spoke-like arrangement of the fibres; and the radiating stripes of varying breadth often present, with a favorable light, a pearly lustre, being situated with regard to the capsule somewhat as the coating of a looking-glass is to the glass. Subsequently gradual breaking-down and partial absorption, at least of the superficial layers, takes place; the lens diminishes in size; its antero-posterior diameter may become even sensibly shorter than before the beginning of the cataract.

It is only the mature cataract (in the sense explained above) that can be easily and entirely removed from the eye, when the other conditions are satisfied. In the case of a lens whose peripheral layers are more or less transparent, there always remain behind more or less considerable pieces, even if all the other conditions for removal are favorable. Likewise, if we operate at the period when the lens is swollen (as explained above), portions almost always peal off. When pieces of considerable size remain behind in the eye, they are, as we shall presently show, by far the most frequent cause of an imperfect or even an entirely unsuccessful result; and the removal of remnants, although opaque, is often effected only with the greatest danger, and frequently is quite impossible.

As the period from the beginning to the completion of the clouding of the lens varies in different cases, we cannot in general judge

as to the completeness of a cataract from the length of time it has existed in a given case. Yet this item is always worth considering, and especially in double cataract is it sometimes important, as we generally find in spontaneous and especially in senile cataract that the cloudiness begins later in one eye than in the other, and progresses at an equal rate in each. Neither can the degree of loss of vision be considered decisive as to the fitness of the cataract for operation, even supposing no complications, and the eye to be otherwise sound. For cataracts which are quite ripe allow more light to reach the retina, and diffuse it less than those which are incomplete; especially when the cloudy portion is more homogeneous, when a part of the opaque cortical substance has become absorbed, and the antero-posterior diameter has diminished. Patients with such a cataract sometimes state that they can see better with the eye than they could a short time previously. Sometimes eyes with complete cataracts can count fingers if within six inches, the light coming from behind, while eyes with the cortical substance still partially transparent show only quantitative sensibility to light.

The surest method of determining whether the cloudiness has become total, is the examination of the lens by daylight, and by the so-called oblique or focal illumination with artificial light. It is often necessary to dilate the pupil with a few drops of sulphate of atropine (half a grain to a drachm of water). The light of a lamp concentrated by a convex glass of two or three inches focal distance being thrown upon the lens, we can easily see whether transparent fibres are present between and behind, or in front of the opaque ones. If we bear in mind that when the pupil is only moderately dilated, the pupillary edge of the iris rests immediately on the anterior capsule, and further that in advanced age the nucleus of the lens is more or less yellow (the color may be compared to that of catgut), while, on the contrary, the cortical fibres always appear white (gray or bluish), then we have the necessary data for estimating the position and thickness of the cloudy cortical fibres. The more clearly the yellow nucleus shows through, the fewer are the cloudy cortical fibres that lie in front of it; either because many of the cortical fibres still remain transparent, or because a large part of them are already absorbed. To determine which of the two is the case, we examine the anterior chamber.

In judging of the ripeness of the cataract it is very important to consider the position of the iris and the size of the anterior chamber; that is, its size in one eye as compared with that of the other; since its absolute size is very variable, being large in myopic, and small in hypermetropic and presbyopic eyes. Supposing both eyes before the commencement of the cataracts to have equally large anterior chambers, if the one lens is still sound or only slightly cloudy, then the size of the corresponding anterior chamber can serve as a safe measure to determine whether that of the cataract-eye has become greater or smaller. Its diminution indicates swell-

ing, its increase shrinking (partial absorption) of the cortical substance.

To recognize small differences in the size of the chamber, imagine a cataract-knife passed through the edge of the cornea, or a plane passed through the greatest circle of the cornea (its edge); we must, however, then look at the eyes from the front in the direction of the axis of vision, and not from the side. For in the latter case the pupillary edge, if only slightly advanced, appears much too far forward. The pupil always seems to be a little larger and nearer us than it really is, as the cornea and aqueous lie in front of it. If we lay a plano-convex glass on the printed lines of a book, and look in the direction of the axis of the glass upon the lines underneath, the letters seem enlarged and nearer, but still the lines are pretty straight, and the middle portion of them is hardly perceptibly displaced. If we look from the side, the line appears curved, the convexity being forward towards the glass. So our judgment of the position of the pupillary edge of the iris is nearest the truth when we look into the eye nearly or quite in the direction of the axis of vision.

When the cataract is ripe, the lens lies more or less loose in the capsule, as a ripe fruit in the shell. But when the lens is only partially cloudy, the transparent layers of fibres adhere just as firmly to the capsule as in a perfectly sound state of the lens. By the process of swelling and the consequent changes of the cortical substance, the normal connection is more or less loosened and destroyed. When once the height of the swelling is passed, i. e. the serous soaking and swelling of the cortical fibres, then two changes may occur: either there begins fatty degeneration and liquefaction of the cortical substance, formation of an emulsive fluid, in which the nucleus, becoming gradually smaller and smaller, always sinks to the bottom, until it finally quite disappears, or the fluid elements are simply absorbed, the layer of cortical substance becomes thinner, especially in the middle portion in the position of the pupil, and the lens presenting all the characters of a hard cataract becomes shaped somewhat like a placenta, but with the edge rather sharp than round.

For our purpose it is at present superfluous to describe the subsequent course of these changes. Cataracts whose cortical substance has undergone fatty decomposition, are called by Arlt overripe. They may sometimes occasion great difficulties to the operator.

[To be continued.]

OIL OF SAVIN AS A REMEDY FOR INTERMITTENT, ETC.

Mr. Editor,—Shortly after the battle of Fair Oaks, or Seven Pines, I was prostrated by an attack of fever, supervening upon a bowel complaint which had troubled me for a few weeks, though it had not

prevented my attending to duty as usual. I had, however, been considerably weakened by the latter complaint, and the accession of fever, together with a dangerous increase of a pulmonary complaint which has been gradually gaining upon me for the last three years, convinced me that it would be some weeks before I could resume my duties, if I ever did. I therefore resigned my position in the 3d Michigan Infantry, and returned home; since which time I have been confined to bed, without any perceptible gain in strength or weight, being only able to sit up an hour or two at a time.

To-day I was reading Taylor's Medical Jurisprudence, 4th edition, and found, under the article Savin, a case where a medical man was transported for having administered the oil in doses of 14 drops to a pregnant female, although it would appear that he was ignorant of her pregnant condition. I say it would appear that he was ignorant of the fact, for the female's evidence went to prove such ignorance, and his conviction of a criminal intention rested mostly upon moral evidence. The female had told him that she had an affection of the heart and liver, and he did just as any one would, he decided that *she* did not know what was the matter; and finding the catamenia suppressed, he probably attributed the whole difficulty to that, and prescribed the oil in powerful emmenagogue doses. On the whole, I think he was very unjustly dealt with, and the evidence of one of the medical witnesses—that such doses were never prescribed except for purposes of abortion—savors of that malicious spirit of envy which, to the disgrace of the profession, is so often found to take the place of fraternal sympathy.

It occurred to me that I would put on record a case which may help to neutralize such evidence hereafter. It is as follows:—An acquaintance of mine, whose son had been for some months troubled with frequently recurring attacks of intermittent fever, called at my office, one evening, and said that for a few weeks past the intermittent had not returned; that he was told that 40 drops of the oil of savin, given with a little sugar, was a specific for recurring ague; and he had accordingly given him 40 drops on a lump of sugar, since which time the ague had not returned. I expressed my surprise at the extent of the dose, and inquired as to the effects. He said he gave it as the chill came on, and he observed "no effects more than if he had taken a glass of any hot stuff." I asked if he had known of others having taken such doses with impunity. He said he had not, but that the person who recommended the remedy to him told him that *he* had known of several cured by it. It would appear, therefore, that the oil may be used in three or four times the quantity that medical men generally have heretofore considered it safe.

As to its abortifacient powers, I know but little from observation, although it is purchased in considerable quantities here, or rather in a great many small quantities (the amount being generally from one to two ounces), by both married and single females. One female, who applied to me for assistance, stated that she knew of its having been

effectual in 10 drop doses, repeated every three hours, for two days; but that double the quantity had failed in her case.

Trusting that this little item may be of use, I give it, with my best wishes. GEO. B. WILLSON.

Port Huron, Michigan, August 25, 1862.

ON THE EMPLOYMENT OF A HEATED THERMOMETER FOR THE MEASUREMENT OF THE COOLING POWER OF THE AIR ON THE HUMAN BODY.

BY JONATHAN OSBORNE, M.D., KING'S PROFESSOR OF MATERIA MEDICA, ETC., ETC.

PHYSICIANS often anxiously examine meteorological tables in order to ascertain the localities best suited to their patients. There is no want of such tables; and many of them constructed with great care and elaboration. Within late years we have not only observations thermometric and barometric, with their highest and lowest daily readings, but those of the wet and dry bulb-thermometer, in order to supply us with data for estimating the amount of moisture in the air; and, in the more extensive establishments, the anemometers and rain gauges appear to complete the entire collection of facts respecting the state of the atmosphere, according to our present mode of observing.

When, however, we wish to learn from such tables the state of localities with reference to their actual influence on the human body, we encounter a deficiency which all have experienced, and which is often attempted to be supplied by an appeal to popular observation, and by resorting to the sensation of hot and cold, possessed in common by the most barbarous as well as the most civilized classes of mankind. Thus, in some localities with a high thermometric temperature, we are informed that invalids complain of the cold; and in others, where the thermometer proclaims it to be cold, the inhabitants find it to be warm. Vague and inaccurate as these popular statements must be, yet, without them, no just estimate of climate can be formed. Within a short period a highly respectable physician brought forward his thermometric observations as an irrefragable testimony of the mild and genial climate of a certain place on the western coast of Ireland, where even the trees are stunted in their growth by the constant wind blowing from the Atlantic. One such example of this kind is surely a sufficient proof that up to the present time we are more dependent on our feelings of cold and heat, imperfect though they may be, than on any meteorological observations hitherto made, and that they are required to enable us to form a judgment as to the cooling or heating qualities of the air.

Several years ago, under a deep conviction that our thermometric observations, as hitherto conducted, were inadequate to instruct the physician in what he most desires to know respecting climate, I brought before the British Association, at their first meeting in

Dublin, a proposal for using a heated thermometer. This was accompanied by several illustrations of the behavior of such an instrument under various circumstances, in order to prove its applicability to every condition of climate or locality. The eminent persons at that time assembled in the section expressed their approbation, and three committees were appointed, viz., one in London, one in Edinburgh, and one in Dublin, to investigate the subject. However, as I did not feel called upon to bestow more labor on a subject which ought to have no more interest for me than for others, it has continued to be neglected up to the present time. Some years later, when the meteorological survey of Ireland was undertaken, under the auspices of the Royal Irish Academy, I suggested that observations with the heated thermometer should be included among those to be made at the various stations. It was recommended by some members of the committee, whose names, were I to mention them, would at once enlist the confidence of the scientific world in its favor; but it was considered by the majority to require too much trouble on the part of the observers, and was consequently abandoned.

Since its first introduction I have never yet been shaken in my opinion of its value; and have subsequently made some changes in order to render its use more intelligible, and, at the same time, to facilitate its application to various practical purposes. The great object has been to render the all-important agencies of heat, and cold, and climate subject to actual measurement, so that they may be entirely, and without any exception or reserve, dealt with like any of the other appliances of medical science.

The principle on which the use of the heated thermometer depends is easy to be understood. The bulb being heated up to 90° Far. represents the heat of the surface of the human body; when in this state it is exposed to a cooler medium—whether in air, or water, or a mixture of both, as moist air—and allowed to cool to 80° Far.; the time required for cooling these 10 degrees represents (inversely) the cooling power exerted by that medium, whatever it may be, or however applied. This cooling power is derived from other agencies besides difference of temperature—as from radiation of the neighboring objects, conducting power of the surrounding medium, and more especially from currents causing various proportions of it to be brought into contact with the heated body within a given time. Now these agencies have their combined results exhibited in the degree of rapidity with which the cooling is effected. Placed, as we are, in a medium, with few exceptions, always below 80°, we are constantly undergoing a process of cooling. In our ordinary clothing we feel just comfortable at 56° in-doors; but when exposed to a current of air, even at the same temperature, we feel cold in proportion to the force of the current, or in proportion to the conducting power imparted to it by increased moisture. Both these are agencies of which the thermometer takes no notice. Its indications

are furnished by the contractions or expansions of a fluid, whether mercury or spirit, which always maintains the same temperature as the surrounding medium, and accommodates itself to these changes by altering its own density in the same proportion. The living animal, on the contrary, as always maintaining a temperature of its own, and as constantly resisting cooling agencies, is not to be considered as passively submitting, like the fluid of the thermometer in its ordinary state. When heated to 90° Far.—that being nearly the temperature of the surface of our bodies—in the rapidity with which it is cooled, depending on the intensity of the cooling influences, it furnishes an index to their combined effect. It does not depict the force of any one of the cooling influences taken singly, but gives the sum of them all acting simultaneously.

This accomplishes the great desideratum of rendering the thermometer practically useful. As the instrument thus heated becomes the representative of the heat at the surface of the human body; and the rapidity with which it is cooled represents the energy of the cooling forces; I venture to propose that, under this adaptation, it should be called the *animal-heat thermometer*. The less the number of seconds in which it cools, the greater is the cooling power, and *vice versa;* so that the greatest warmth is expressed by the greatest number of seconds required for cooling down a given number of degrees. The thermometer for this purpose is to be graduated only from 90° to 80° Far. At each observation it must be heated up to 90°. This may be done by immersing the bulb in warm water; after which it must be wiped. Or it may be heated in its tin case over a spirit lamp. Another mode of heating it, which appears very unscientific, but is very convenient when out of doors, is to hold the bulb of the thermometer close to the neck of the observer, inside his shirt collar, for two or three minutes, when it may always be heated to the required temperature, or even a few degrees above it.

For the *animal-heat thermometer*, the number of seconds during which it cools these 10° forms the scale of measurement. The number one commences when the instrument is plunged into water at, or nearly at, freezing point; and for the other end of the scale, when in calm air, at temperatures approaching 80° Far., the number of seconds will amount to several hundred. At these high temperatures it would be most convenient, and even become necessary, to take only the five degrees from 90° to 85° Far.; and in this case the number of seconds would be much less than half, from the rapidity of cooling being in a greatly increased ratio to the difference of temperature.

A very important consideration is the choice of thermometers. For this purpose they should be without any kind of frame, except a hook at the top for convenience of suspension. I prefer the spirit thermometer as being more easily seen, and as less rapid in its descent than mercury, and the cylindrical bulb as being less liable

to be broken than the spherical bulb. In order to obtain uniformity in the action of different thermometers, to be used by observers in different localities, it will be necessary to place a number of them, previously graduated at 80° and 90°, in cold water and cold air of certain assigned temperatures, and to select from these such as cool down at what shall be fixed as a standard rate.

For example, the thermometer now used by me cools down the 10° in water at rest, temperature 45° Far., in 6″; and in water at rest, temperature 65° Far., in 12″. In water the cooling is too rapid to secure accuracy in counting the seconds, and therefore must not be depended on. The rate of cooling in air may be taken by placing the thermometer in the middle of a cylindrical bottle of certain dimensions, say two inches in diameter, so as to guard it against currents. If the thermometer which I now use be taken as a standard, its rate of cooling from 90° to 80°, within this cylinder, is as follows:—At 40° it cooled in 122″; at 60° it cooled in 186″. If the instrument was not enclosed within the cylinder the results would be very different and very uncertain, from the effect of currents of air, even in the most sheltered apartments, as will be evident from experiments to be mentioned hereafter.

For counting the seconds a second watch may be used; but as it requires some practice to keep the eye both on the thermometer and the dial at the same time, and especially at the moment of stopping, the easiest mode is to use a string pendulum vibrating half seconds. This is portable; and the rod or ring to which it is attached may be suspended any where within view of the observer, due care being taken that it shall not produce a current of air so as to affect the bulb of the thermometer.

The following observations are intended to illustrate the facts exhibited by the heated thermometer:—

First.—*It shows the conducting power of air or water, respecting which the ordinary thermometer is absolutely silent.*

The temperature of an apartment warmed with fire and gas was 54° Far.; in it the *animal-heat thermometer* cooled from 90° to 80° Far. in 94″. The same heated thermometer, in water of same temperature, cooled the same amount in 8″. Thus showing that water at 84° Far. is nearly 12 times as cold as the air at the same temperature—a fact conformable with our sensations on taking a cold bath of the same temperature as the air, but of which the ordinary thermometer takes no notice.

In a closed room, temperature 40° Far., it cooled in 74″. In the same room, same temperature, the bulb loosely covered with a piece of damp woollen cloth, it cooled in 36″. Thus showing the effect of damp clothes, even in the house, to be as 2 to 1. This proportion would, no doubt, be greatly augmented out of doors, and by exposure to a breeze.

Second.—*It shows the cooling effects of currents in the surrounding media of air or water.*

In water at rest, temperature 70° Far., it cooled in 24″; but when agitated in the same, in 15″. In this simple experiment we see the real limit to swimming. Great as are the muscular achievements in which some men excel their fellows, none have ever been able to swim beyond a certain distance—such as that across the Hellespont—because the application of fresh surfaces of water, even of the ordinary temperature, cools the body beyond its powers of supplying heat. Here we have the cooling as increased by progression compared with our remaining stationary in the water in the proportion of 100° to 60°, which would be much greater at a lower temperature.

In a room, temperature 57°, the *animal-heat thermometer* cooled in 115″. When blown on with a bellows, in the same room, it cooled in 16″. It is needless to say that the thermometer, in its ordinary application, gives no note of this difference; the wind blown from the bellows having the same temperature as the air of the apartment, and yet the cold is nearly as 100 to 14. This cooling effect of currents is illustrated by the punkah used in the East, and by the ordinary fan. Even in a room, with all the windows and doors shut, there are cooling effects of the internal currents to be measured by this instrument. Thus, the animal-heat thermometer, in a closed apartment, temperature 60°, cooled in 131″. Placed in the same apartment, in a cylindrical glass jar about two inches in diameter, it cooled in 157″; showing the warmth in the one case to that in the other as 83 to 100—of which the thermometer gives no indication.

Third.—*It shows the effects of wind, that most important element of climate, and which is entirely unheeded by the ordinary thermometer.*

Exposed to the open air, temperature 61°, it cooled in 45″. Exposed to the same air, but protected by the glass cylinder, it cooled in 149″; showing the warmth experienced in the one case to be to that in the other as 30 to 100; and yet in our best thermometric accounts of climates this difference is unnoticed, as if it did not exist.

I have learned from a lady, once resident in St. Petersburgh, that during the great severity of winter, when the thermometer is at many degrees below zero, the drivers of public vehicles are bound to be at their stands; but if there is a wind, even to a small degree, they may stay at home, it having been ascertained that dangerous and even fatal effects resulted from such exposure. Similar observations are recorded in the journals of our arctic voyagers.

This cooling effect of the wind, which makes itself to be felt even when blowing at a moderate temperature, has not hitherto been attempted to be estimated—and it is improbable that it will ever be accomplished in any other way than that now proposed. Even with respect to the anemometer, supposing that it could be rendered applicable to this purpose, yet difficulties meet us *in limine*. Mr. Glaisher (Report on Meteorology, 1847) says that "we can speak

with no confidence as to the average strength of the wind, no two observers having estimated the value upon the same scale."

Fourth.—*It shows the refrigerating effect of air admitted into apartments from open windows.*

In a room without a fire, temperature 44°, it cooled in 72″. In the same room, within a foot of the window open a few inches, the night being calm, and the external temperature being 34° Far., it cooled in 32″. In this observation the night was remarkably calm, and yet the cooling effect produced was more than two to one, although the difference of temperature, according to the ordinary thermometer, was only that between 34 and 44.

On another night, the internal temperature being 51° and the external 45°, *the animal-heat thermometer*, in the same apartment, near the closed window, cooled in 100″; but when a small portion of the window was open, so as to admit a blast from without blowing in that direction, it cooled in 33″; that is, the warmth which was as 100 suddenly became as 33, a ratio which would be greatly increased if the apartment had been at a high temperature; and it is in such cases that windows are most frequently opened for the admission of air.*

Fifth.—*It shows to what degree the heat derived from an open fireplace is accompanied by a cooling process from the current of air rushing towards the fire.*

In front of a small screen opposite the fire the thermometer stood at 61° Far., the *animal-heat thermometer* cooled in 123″. Behind the same screen the thermometer stood at 54°, the *animal heat thermometer* cooled in 79″. Now, in an apartment of the same temperature, the *animal-heat thermometer*, not near the fire, cooled in 100″. This shows, that in the case of a man sitting opposite the fire, warm as his shins may be, the calves of his legs are not only not warmed, but are exposed to a cold above that of an ordinary apartment of the same temperature in the proportion of 100 to 79.

Sixth.—*It shows the cold and heat of climates as actually felt by human beings.*

The tables which I have kept to compare the *animal-heat thermometer* with the ordinary thermometer, as a means of measuring cold, prove the latter to represent only one out of several agencies engaged: hence, while sometimes a certain conformity between them is observable, yet the *animal-heat thermometer* takes a much

* The cold air thus applied becomes indeed "*the arrow that flyeth by day*," and signalizes its visit not so much by present inconvenience as by those various inflammatory and often fatal disorders resulting from it, which are so well known to the medical practitioner. In a long corridor at Sir Patrick Dun's Hospital, formerly left exposed to a violent current of air from open doors at the end of it, and felt to be inclement and dangerous even by those most reckless of cold, I believe it could be proved that to stop in it for a stated number of hours would be attended with more danger than to be present for the same space of time in any of the great battles fought in Europe. In none of these have the killed and wounded amounted to more than one-fourth of the armies engaged; a portion inferior to that of the fatal and dangerous diseases certain to be produced by the blast in that corridor during the same number of hours. The agency of cold as a cause of disease is apparent in the tables of mortality during the months of winter as compared with those of summer. Even during the latter season the same agency is in active operation. From an estimate which I made of the patients, in summer, at Sir P. Dun's, most of them chronic and all serious cases, above one-half were to be distinctly referred to cold variously applied, but in the greatest number to currents of air.

wider range, shows a greater sensibility, and always has this distinctive peculiarity, that it represents the temperature as judged of by the feelings of the observer. This conformity between the results of the *animal-heat thermometer* and our feelings is confirmed no less on taking averages than in individual observations. Thus, on comparing two tables—one of 20 days' observations, taken in September, outside a window with a north aspect, but in some degree sheltered from that wind, and the other table of 24 days' observations, taken inside the apartment, which was always without a fire, the heat of the outside was to that of the inside, according to the ordinary thermometer, as 90 to 100, but according to the *animal-heat thermometer*, as 54 to 100. Now, that this latter number expresses the truth must be evident to any one who has ever enjoyed the shelter of a house as contrasted with exposure to the open air.

When we find in Professor Dove's isothermic lines that in the month of January the temperature of the centre of Ireland is the same as that of Montpellier or Marseilles, we see a statement so contrary to the experience of living men and women as to proclaim loudly the want of some other means for ascertaining the effects of climates besides those hitherto in use. It is under the conviction that this mode of observation supplies the defect, that it is submitted to the medical profession as most immediately suited for their purposes.

The apparatus is so simple, the method of using it so easy, and its results so exactly accordant with the effects produced on the sensible surface of the human body, that by it the one instrument seems to present us with an epitome of all that we want to know from all the instruments now used in meteorology: hence, then, long as this proposal has been neglected, I cannot refrain from attributing it to the imperfect manner in which it has been brought forward; and I still hope that, sooner or later, it may attract the notice of those who shall have the opportunities of testing its utility and practical importance.—*Dublin Quar. Jour. of Med. Science.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, SEPTEMBER 4, 1862.

We stated in our last, on high official authority, that the Fellows of the Massachusetts Medical Society are, by a clause in their Charter which we copied, exempt from enrolment for military duty. We have since been informed that the statement is incorrect, the clause having been set aside by the Supreme Judicial Court in 1812. The question is not likely at present to be one of any great practical importance, as the prospect is that the new levies will be filled without resorting to a draft. As a question of patriotism we do not fear that the members of the medical profession will be behind the rest of the

community in any position where their services may be needed by our country. They have already done an incalculable amount of work, and have shown themselves ready to go forward as volunteers, whenever a sudden emergency, like that which at this moment stirs the community to its very centre, calls for their services in aid of our overtasked brethren in the field. Massachusetts has just sent some of the most prominent members of the profession to Virginia, in answer to the call of the Government, and the number who offered their services was larger than was asked for. The following physicians and surgeons have volunteered their services. As the Surgeon-General had only orders to send twenty, whereas some forty offered, the rest were obliged to go on their own responsibility :—

Dr. George H. Gay, John Whitten assistant, Drs. Henry G. Clark, C. H. Stedman with his son as assistant, J. H. Dix, H. I. Bowditch and assistant, J. S. Flint, C. E. Buckingham, G. F. Bigelow, D. McB. Thaxter, J. H. Blake, W. H. Paige, A. Ruppaner, S. H. Carney, H. L. Shaw, R. J. P. Goodwin, and J. Green and assistant, of Boston; Drs. H. A. Martin, J. Waldock, B. F. King, J. G. Arnold, and W. S. Coffin, of Roxbury; Drs. Anson P. Hooker of East Cambridge, L. B. Morse of Watertown, J. H. Warren of Dorchester, W. G. Breck and Alfred Lambert of Springfield: L. S. Davis, P. W. Hartley, W. G. Bennett and assistant, of Fall River; Drs. Child, O. E. Brewster, P. L. Miller, P. H. Manning, A. M. Smith, E. V N. Fisher and Cady, of Pittsfield; Drs. Haddock of Lynn, Aiken of Dedham, Francis of Brookline, and P. P. Ingalls.

We published last year, at the request of a correspondent, the most important items in the fee table of the Boston Medical Association. Since then we have met with several local fee lists in various American Medical Journals, among them the following for Cincinnati, which we take from the *Cincinnati Medical and Surgical News*. The fee list is introduced by a series of resolutions setting forth the necessity of increasing the rate of charge which has been the standard since 1843, when the expenses of living were much less than at the present time, &c., of which resolutions we print the last:—

"*Resolved*, That while for the purpose of securing such remuneration, promoting uniformity so far as practicable, and thus avoiding troublesome litigation, we pledge ourselves to be governed by the following fee bill in our charges to those who are able to pay; we will, nevertheless (as we have ever done), exercise clemency to those less favored by Providence, and will give our time and strength willingly and cheerfully to the suffering poor, without a wish for compensation.

"For a single visit or advice in ordinary cases, where no further attendance is required	$2,00 to 5,00
Each ordinary visit, maximum charge,	2,00
An extra charge to parts of the city remote from the residence or office of the Physician	
Visit to country in addition to regular charge, per mile	1,00
Special visit in city at time appointed by patient or friends	3,00
Night visit after 10 o'clock	5,00
With extra charge for distance, per mile	2,00
First consultation visit	5,00 to 10,00
With addition for distance, per mile	1,00
Subsequent consultation	2,00 to 5,00
Consultation at night	10,00 to 15,00
With mileage for country at the rate per mile	1,00

After the first consultation, if the consulting physician attends regularly at every visit of the attending physician, each should charge	2,00
Visit to Newport or Covington	3,00 to 5,00
" " " at night	6,00 to 10,00
" " " in consultation	8,00 to 12,00
" " " in consultation at night	12,00 to 15,00
Obstetrical services in natural labor, with ordinary detention	25,00
Difficult or protracted labor, according to the detention, danger, and responsibility involved	30,00 to 100,00
Each necessary visit after confinement	2,00
Written opinion or advice	5,00 to 25,00
Office advice	1,00 to 10,00
Certificate for Life Insurance	5,00
Venesection at office	2,00 to 3,00
Vaccination, including visit	3,00 to 5,00
Where more than one member of a family is vaccinated at same time, additional for each	1,00
Subsequent visit for inspection	2,00
Introduction of catheter or bougie, including visit	5,00
" " " at office	3,00
Visit to transient persons at hotel or steamboat	2,00 to 5,00
In obstetrical cases, if the accoucheur arrives after the birth of the child, and only delivers the placenta	10,00 to 15,00
Post-mortem, at request of friends	25,00

"The practitioner is expected to charge extra according to his discretion for unusual detention in any case, or for special services not above provided for, such as the use of the speculum, injecting uterus, physical examination of the chest, &c. In addition to which, we should exercise the privilege (which lawyers always claim) of demanding of our wealthy patients a special fee in very important cases, involving great risk of life to the patient, and corresponding solicitude and responsibility on the part of the medical attendant.

"The following resolutions were adopted:—

"*Resolved*, That it is the sense of this meeting that any physician may depart from the fee bill now adopted when he honestly believes that the circumstances of his patient require it.

"*Resolved*, That medical bills be considered as due when the services are rendered, and that it be obligatory to collect at least twice a year."

We copy the following useful article, by Dr. T. H. Walker, on Camp Diarrhœa, from the August number of the *Chicago Medical Journal*:—

"While I was engaged in the army before Corinth, diarrhœa prevailed as an epidemic throughout the camp, rendering the soldiers unfit for duty. I had a large number of patients under my charge, the majority of the cases being complicated with intermittent fever, producing great prostration and difficulty in treatment.

"The disease was usually ushered in by loss of appetite, irritability of the stomach, frequent vomiting, and intermittent pulse. The evacuations from the bowels were very frequent—often as many as thirty in the day.

"The treatment adopted by the Surgeons was very diverse and unsatisfactory.

"By close examination, I found that the alimentary canal was loaded with undissolved ingesta. There was pain arising from the irregular and violent peristaltic action, with soreness throughout the course of the large intestine, the frequent stools accompanied by distressing tenesmus. The secretion from the liver was irregular, often excessive

and of an acrid nature. The skin was sallow and the tongue heavily furred; the pulse compressed; frequently headache and disturbed sleep.

"The causes are various, the hepatic disorder apparently often secondary to the intestinal irritation—apt to be provoked by excessive use of stimulants; exposure to cold and wet, especially in the fall months. In this case there is usually less pain, unless it passes into dysenteric diarrhœa from the presence of aggravating influences.

"The primary step in treatment is to remove the cause if it can be ascertained. My attention was first directed to the sanitary condition of the camp. I caused the tents to be rolled up, aired and dried, and all offensive matters to be removed; and both the invalided and healthy soldiers to be washed, and their clothes to be changed and cleansed as often as the conveniences of the camp would admit.

"Next I looked to the food and cookery department, which I found extremely faulty, soldiers often neglecting to more than half cook their rations, with resulting indigestion and passage of the crude mass into the intestines, exciting and intensifying the morbid action. There was not much choice in diet to be had in camp, but by proper attention to its preparation a great barrier to the return of health was surmounted. The means for making a nourishing and suitable soup are always at hand in camp; meat, beans, rice, and even potatoes, which, by the skill of any competent cook, can easily be made into a soup perfectly harmless and wholesome.

"So far as medication was concerned, I usually commenced my treatment by giving large doses of sulphate of magnesia to wash out the contents of the bowels. I then administered ipecac, opium, hydrarg. cum creta and quinine, the proportion of each varying with the peculiarities of each case. In the course of twenty-four hours the evacuations would assume a dark color, and convalescence rapidly ensue. The ipecac and opium were given in moderate doses. The hydrarg. cum creta appeared to act in the most salutary manner in cases where calomel would irritate excessively. The quinine, when there was intermittent complication, when given alone did not fail to aggravate the difficulty, but in the above combination had a most happy effect.

"Of eighty-eight cases under treatment at one time, the whole were reported fit for duty in seven days from the commencement of the treatment.

"The Brigade Surgeon, who visited the camps with reference to the presence of this scourge, was so strikingly impressed by the marked superiority of this treatment to that relied upon by others, that he gave it cordial and high approval, and recommended it to the other Surgeons. Previously, too much reliance had been placed upon calomel, opium and astringents, and, worst of all, upon alcoholic stimulants: but since then sulphate of magnesia takes the first rank. One hundred and fifty barrels of it were ordered for Gen. Grant's division by the Medical Director, to be used as above indicated.

"The writer, in concluding this hasty sketch of the method relied upon by him in opposing this 'scourge of the camp,' begs leave to say that while he does not claim any novelty in it, or new discovery, yet the application never has, to his knowledge, previously received the high place in the confidence and practice of the Army Surgeons which the experience above recorded showed it ought to receive."

At a meeting of the Hampden District Medical Society, held in Springfield on the 19th inst., the following resolutions were unanimously adopted:—

Whereas, We are called upon to record the death of Dr. E. G. Pierce of Holyoke, President of this Society, who died at Fortress Monroe, a surgeon in the army of his country, therefore—

Resolved, That in the removal of Dr. Pierce, we have lost an accomplished physician and gentleman, and gained additional honors for our noble profession.

Resolved, That, as a mark of respect for the deceased, no successor shall be chosen to the chair, so unexpectedly vacated, until the next annual meeting of this Society.

Resolved, That we deeply sympathize with the only daughter and other relatives of the deceased, in this most sudden and afflictive dispensation of Providence.

Resolved, That these resolutions be forwarded to the Boston Medical and Surgical Journal, and the *Springfield Republican*, for publication.

John Witter, *Sec. pro tem.*

Springfield, Aug. 30, 1862.

By a General Order respecting the drafting of the militia, issued on the 1st inst., by the Governor of this Commonwealth, the following gentlemen are appointed as Surgeons to whom applications are to be made for certificates of disability for military service.

For the County of Barnstable.—Drs. Geo. Shove, of Yarmouthport; John M. Smith, Barnstable; Jonathan Leonard, Sandwich; Franklin Dodge, Harwich.

Berkshire.—Drs. Timothy Childs, of Pittsfield; Henry L. Sabin, Williamstown; Clarkson T. Collins, Great Barrington; Clifford C. Holcomb, Lee.

Bristol.—Drs. Lyman Bartlett and William A. Gordon, of New Bedford; Robert T. Davis, Fall River; Thaddeus Phelps, Attleborough; Henry B. Hubbard, Taunton.

Dukes.—Drs. Daniel A. Cleaveland and William H. Luce, of Tisbury.

Essex.—Drs. Benjamin Cox, Jr., of Salem; Henry C. Perkins, Newburyport; Herman E. Davidson, Gloucester; Joseph Kittredge, North Andover; George Osborne, South Danvers; Kendall Flint, Haverhill; Stephen Huse, Methuen; Edward Newhall, Lynn.

Franklin.—Drs. J. W. D. Osgood, of Greenfield; Edward Barton, Orange; Charles M. Duncan, Shelburne.

Hampden.—Drs. Nathan Adams and William G. Breck, of Springfield; Jas. H. Waterman, Westfield; H. S Lucas, Chester Factories.

Hampshire.—Drs. Daniel Thompson, of Northampton; William M. Trow, Williamsburg; D. W. Miner, Ware; Benj. F. Smith, Amherst.

Middlesex.—Drs. Josiah Bartlett, of Concord (President of the Massachusetts Medical Society); William Mason, Charlestown; Morrill Wyman, Cambridge; Anson Hooker, East Cambridge; Gilman Kimball and Nathan Allen, Lowell; Henry Bigelow, Newton; S. G. Burnap, Holliston; R. S. Warren, Waltham; Wm. Ingalls, Winchester.

Nantucket.—Dr. Elisha P. Fearing, of Nantucket.

Norfolk.—Drs. Appleton Howe, of Weymouth; Henry Bartlett, Roxbury; Benjamin Cushing, Dorchester; A. LeBaron Monroe, Medway; Harvey E. Clapp, Wrentham; Ebenezer P. Burgess, Dedham.

Plymouth.—Drs. Alexander Jackson, of Plymouth; Asa Millett, North Bridgewater; William E. Sparrow, Mattapoisett; R. T. P. Fiske, Hingham.

Suffolk.—Drs. Edward Reynolds, John C. Dalton, Oliver Wendell Holmes, George H. Gay, Robert W. Hooper, Samuel L. Abbot, of Boston; Samuel G. Howe, South Boston; W. H. Thorndike, East Boston; W. G. Wheeler, Chelsea.

Worcester.—Drs. Joseph Sargent and Henry Clarke, of Worcester; Alfred Hitchcock, Fitchburg; John G. Metcalf, Mendon; Wm. D. Peck, Sterling; Allen C. Fay, Milford.

Artificial Limbs for Maimed Soldiers.—We alluded some time since to the appropriation of a sum of money by Congress for the purchase of artificial limbs for maimed soldiers. A Commission, consisting of several of the most eminent surgeons in the country, is about to be convened in New York by Surgeon-General Hammond, in order to decide upon the best method of applying this fund. They will select the limbs best adapted to the purpose, and make such recommendations as seem advisable after due deliberation. We again express the hope, that medically-educated mechanical surgeons will alone be found worthy of the patronage of Government.—*Am. Med. Times.*

Diseased Cattle.—In a report just issued by the Registrar-General of Scotland, he calls the attention of the public to the fact that ever since pleuro-pneumonia broke out among the cattle of this country a few years since, the returns of mortality have shown that carbuncle, a disease formerly very rare, has become comparatively common. Dr. Livingstone observed in Africa that if the flesh of animals who die from pleuro-pneumonia is eaten it causes carbuncle in the persons who eat it, and that neither boiling nor roasting the flesh, nor cooking it in any way, gets rid of the poison. It is true that if such cattle are ever sold for food they are killed before they fall victims to the disease naturally, but still the poison is in them. The report suggests as a subject for inquiry whether the new form of disease, which we term diphtheria, may not be partially induced by the use of diseased flesh.—*Medical Times and Gazette.*

Results of the Revaccination of the Prussian Army in 1861.—During 1861 there were 64,985 soldiers vaccinated or revaccinated, and of this number, 53,979 individuals exhibited plain marks of prior vaccination, and 7204 indistinct marks, while in 3802 no traces were visible. The vaccination now performed was regular in its course in 41,494; irregular in 7481: unsuccessful in 16,009; total 64,985. The unsuccessful cases vaccinated again, furnished 5658 additional examples of successful vaccination, making 47,152 or 72 per cent. of those vaccinated. Among the soldiers who had been now or on former occasions successfully revaccinated, there appeared during the year four cases of varicella and ten of varioloid, but no case of variola. In the entire army there appeared during 1861, 56 cases of this class of diseases, viz., 7 of varicella, 45 of varioloid, and 4 of true variola. Of these, 25 cases (2 of varicella, 21 of varioloid, and 2 of variola) occurred in soldiers who had not been revaccinated; 17 (viz., 1 of varicella, 14 of varioloid, and 2 of variola) in soldiers revaccinated without result; and 14 (viz., 4 of varicella, and 10 of variola) in cases in which

revaccination had succeeded. The great bulk of these cases were of a mild or even trivial character; but 4 of them ended fatally,—viz., a case of variola occurring in a soldier who had not been revaccinated; 1 of varioloid, revaccination having been performed without success; together with a case of varioloid and another of variola occurring in recruits who had not been revaccinated.—*Medical Times and Gazette*, from *Berlin Med. Zeit.* No. 35.

Case of Double Uterus, with Simultaneous Gestation.—At a late meeting of the Obstetrical Society of London, Dr. Graily Hewitt made the following communication:—"Mr. Grace was summoned by his father to see a patient in labor for the fourth time, aged twenty-six. Twice previously there had been premature birth; the third child did not live. When first seen by Mr. Grace, labor had been going on for fifteen hours; the waters had escaped. On examination, a hand was found presenting in the vagina, and the os about half dilated; but lying posterior to this, another os was discovered, with the head of a child presenting. Septum between the two half an inch thick, and extending up as far as could be reached. The anterior os was dilated, the child turned, and delivery effected. The placenta then followed. The child was dead, and apparently seven months old. The posterior os was next dilated, turning effected, and a live child extracted, which survived only a few hours. The placenta of the second child was expelled without difficulty. Both children were females, equal in development. No flooding or other complication interfered with the perfect recovery of the patient."

Dr. Graily Hewitt observed that the case, for the particulars of which the Society was indebted to Mr. Grace, was a very unusual and interesting one. In the elaborate work of Kussmaul on the Malformations of the Uterus, which contained a collection of cases of various kinds, there were only two specifically recorded precisely similar to that observed by the author of the paper. The case of Mr. Grace resembled other cases of double uterus recorded by Kussmaul in respect of the feebleness of the uterine pains said to have been observed. Abortion and premature labor seemed especially liable to occur in cases of double uterus, and this fact was corroborated by the case then before the Society.—*London Lancet.*

On Poisoning by Phosphorus.—Dr. Lewin has recently directed the attention of the Medical Profession to the curious fact that there is an evident connection between poisoning by phosphorus and fatty degeneration of the liver. He was led to this discovery by finding in the published reports of cases of poisoning by phosphorus, in which autopsies had been made, statements regarding an alteration of the liver. He then experimented upon dogs and rabbits, and found that we may, by administering small doses of phosphorus which do not immediately kill, cause fatty degeneration of the liver, with destruction of the acini, that is, a condition closely analogous to that which is found to exist in cases of acute atrophy of the liver. He also discovered that poisoning by phosphorus produced a peculiar affection of the kidneys, and rendered the urine albuminous as long as life continued.

These physiological experiments were soon afterwards shown to be perfectly correct by a case of poisoning by phosphorus which

occurred in the clinique of Professor Frerichs, in the Charité Hospital. A servant girl committed suicide by eating the tops of a thousand lucifers; when brought into the Hospital she suffered from icterus and enlargement of the liver: the urine contained biliphæin and albumen. She died shortly afterwards without having had much pain, and no symptoms of a disturbance of the nervous system having been observable. The post-mortem examination, which was performed with the greatest care, showed that the blood was in a state of dissolution, it had the color of cherry juice, was very thin, and no coagula, and scarcely any globules were found in it. The skin and the mucous membranes were suffused with blood, the liver was greatly enlarged, and its edges blunt. On being examined by the microscope, the acini appeared to be filled with fat to bursting.—*For. Corres. Med. Times and Gazette.*

We understand that Prof. Horace Green is engaged, and has been during his leisure hours, for a number of years, in preparing a somewhat elaborate work on the *Nature and Treatment of Diseases of the Lungs and of their Appendages.* Having given, as many of our readers are doubtless aware, more than twenty years of his professional life almost exclusively to the study and treatment of this class of diseases (over ten thousand cases of this nature we have learned having in that time come under his observation), Dr. Green should possess a large and valuable amount of information on this important class of affections. A most important contribution to current knowledge may therefore be expected to emanate from his ready pen, and we would advise all desirous of adding a book on this subject to their libraries, to wait for the publication of the work here announced.—*American Medical Monthly.*

The Medical Examining Board for contract surgeons in New York and Philadelphia has been adjourned by order of the Surgeon-General.

General Saxton has made contracts with Drs. Hawks, Bundy, Wakefield, and McClintock, to attend to the health of the Africans in Gen. Hunter's department.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, AUGUST 30th, 1862.

DEATHS.

	Males.	*Females*	*Total*
Deaths during the week,	37	58	95
Average Mortality of the corresponding weeks of the ten years, 1851–1861,	52.0	50.0	102.0
Average corrected to increased population,	..	..	114.55
Deaths of persons above 90,	..	0	0

Mortality from Prevailing Diseases.

Phthisis.	Chol. Inf.	Croup.	Scar. Fev.	Pneumonia.	Variola.	Dysentery.	Typ. Fev.	Diphtheria.
6	21	1	6	1	0	5	2	1

RECEIVED,—Causes and Cure of Diseases of the Feet: with Practical Suggestions as to their Clothing. By C. H. Cleaveland, M.D. Illustrated. Cincinnati: Bradley & Webb. Pamphlet, 8vo. Pp. 111.—Lindsay & Blakiston's Physician's Visiting List for the year 1863.

DEATHS IN BOSTON for the week ending Saturday noon, August 30th, 95. Males, 37.—Females, 58.—Abscess, 1—accident, 1—apoplexy, 1—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 1—inflammation of the brain, 1—burns, 1—cancer, 1—cholera infantum, 21—consumption, 6—convulsions, 5—croup, 1—debility, 1—diarrhœa, 6—diphtheria, 1—dropsy, 2—dropsy of the brain, 4—drowned, 1—dysentery, 5—epilepsy, 1—erysipelas, 1—scarlet fever, 6—typhoid fever, 2—gastritis, 1—disease of the heart, 1—icterus, 1—intemperance, 2—inflammation of the lungs, 1—marasmus, 6—measles, 3—old age, 1—paralysis, 1—puerperal disease, 1—stomatitis, 1—syphilis, 1—unknown, 3.

Under 5 years of age, 64—between 5 and 20 years, 1—between 20 and 40 years, 8—between 40 and 60 years, 12—above 60 years, 10. Born in the United States, 78—Ireland, 12—other places, 5.